Appl. No. 10/089,525
Amdt. dated November 24, 2004
Reply to Office Action of October 28, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Original) A method for modulating levels of vWF or FVIII in an animal, the method comprising administering to the animal an agent that causes an increase or a decrease in ST3Gal-IV sialyltransferase activity in the animal.

2. (Original) The method of claim 1, wherein the method decreases levels of vWF or FVIII and the agent decreases ST3Gal-IV activity.

3. (Original) The method of claim 2, wherein the agent decreases expression of a gene that encodes ST3Gal-IV.

4. (Original) The method of claim 3, wherein the agent is an antisense nucleic acid that hybridizes to an ST3Gal-IV-encoding nucleic acid.

5. (Original) The method of claim 2, wherein the agent inhibits enzymatic activity of an ST3Gal-IV polypeptide.

6. (Original) The method of claim 2, wherein the method is performed in conjunction with administration of a drug for which blood clotting is a potential side effect.

7. (Original) The method of claim 6, wherein the agent is administered before or simultaneously with the drug for which blood clotting is a potential side effect.

8. (Original) The method of claim 2, wherein the method is performed as a prophylactic measure against atherosclerosis.

9. (Original) The method of claim 8, wherein the atherosclerosis is associated with coronary artery disease or peripheral vascular disease.

10. (Original) The method of claim 2, wherein the method is performed as a therapeutic measure against atherosclerosis.

11. (Original) The method of claim 10, wherein the atherosclerosis is associated with coronary artery disease or peripheral arterial disease.

12. (Original) The method of claim 2, wherein platelet formation is not significantly affected by administration of the agent to the animal.

13. (Original) A method of monitoring the efficacy of a method for inhibiting ST3Gal IV in a mammal, the method comprising testing cells obtained from the mammal for the presence or absence of a cell-surface oligosaccharide having a terminal α2,3-linked sialic acid, wherein the absence of the terminal α2,3-linked sialic acid is indicative of an inhibition of ST3Gal-IV inhibition.

14. (Original) The method of claim 13, wherein the cells are blood cells, myeloid cells, or stem cells.

15. (Original) The method of claim 13, wherein the presence or absence of the terminal α2,3-linked sialic acid is determined by contacting the cells with a binding moiety that specifically binds to the oligosaccharide having the terminal α2,3-linked sialic acid but does not bind to the oligosaccharide which lacks the terminal α2,3-linked sialic acid, and a lack of binding is indicative of an inhibition of ST3Gal-IV inhibition.

16. (Original) The method of claim 15, wherein the binding moiety comprises a lectin.

17. (Original) The method of claim 16, wherein the lectin is a member of the siglec family of lectins.

18. (Original) The method of claim 13, wherein the presence or absence of the terminal α2,3-linked sialic acid is determined by contacting the cells with a binding moiety that specifically binds to the oligosaccharide lacking the terminal α2,3-linked sialic acid but does not bind to the oligosaccharide which includes the terminal α2,3-linked sialic acid, and the presence of binding is indicative of an inhibition of ST3Gal-IV inhibition.

19. (Original) The method of claim 18, wherein the binding moiety comprises a lectin.

20. (Original) The method of claim 19, wherein the lectin is a peanut agglutinin (PNA) or an Erythrina cristagalli (ECA) lectin.

21. (Original) A eukaryotic cell that comprises a non-naturally occurring mutation in an ST3Gal IV allele.

22. (Original) The eukaryotic cell of claim 21, wherein the cell comprises a non-naturally occurring mutation in each of at least two ST3Gal IV alleles.

23. (Original) The eukaryotic cell of claim 21, wherein the mutation results in a deficiency in active ST3Gal IV activity in the cell.

24. (Original) The eukaryotic cell of claim 23, wherein the mutation causes a decrease in expression of the ST3Gal IV allele.

25. (Original) The eukaryotic cell of claim 23, wherein the mutation causes a decrease in enzymatic activity of an ST3Gal IV polypeptide expressed from the ST3Gal IV allele.

26. (Original) A non-human chimeric or transgenic animal that comprises a eukaryotic cell of claim 21.

27. (Original) The non-human chimeric or transgenic animal of claim 26, wherein the animal is a transgenic mouse.

28. (Original) The non-human chimeric or transgenic animal of claim 26 wherein the cell comprises a non-naturally occurring mutation in each of at least two ST3Gal IV alleles.